

## Efficacy and safety of topical vitamin E for the treatment of chemotherapy skin reactions (Article)

[Vitamina E topica e reazioni cutanee in corso di terapie oncologiche: Ualutazione dell'efficacia e della tollerabilità]

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### Abstract

**Introduction.** Skin is a specific target of new cancer treatments. Xerosis, inflammatory lesions and radiodermatitis are the most frequent skin reactions. They can decries patients quality of life and compromise their compliance with cancer therapy. Vitamin E is well known for its antioxidant action, for which it is used in many inflammatory skin diseases. We evaluated the efficacy and safety of a medical device based on vitamin E for the treatment of xerosis, of consequent effects of papulopustular rash and radiodermatitis. **Materials and methods.** We selected 20 women between 35 and 60 years old, affected by xerosis, consequent effects of papulopustular rash and radiodermatitis. The protocol provided for the application of a topical product consisting of tocopherols and tocotrienols to 10% to 0.3% twice a day to the affected area. The evaluations were carried out at the beginning of treatment (T0) and after 40 days (T1) using the following methods: photographic assessment; clinical evaluation; evaluation of Trans Epidermal Water Loss (TEWL) by corneometry; assessment of skin color by colorimeter X-Rite® 968 according to the L<sup>\*</sup>a<sup>\*</sup>b<sup>\*</sup> system; assessment of tolerability with a questionnaire; assessment of adherence to therapy through the completion of a daily diary. Statistical analysis was performed by calculating the Student's t. **Results.** Photographic evaluation shows a significant improvement of the lesions from T0 to T1. Clinical evaluation showed a good improvement in 13 of 20 patients (65 %). TEWL in patients with xerosis went from a value of 19.86 at T0 to a mean value of 14.62 at T1. The outcomes of patients with papulopustular rash presented at T0 an average value of TEWL of 17,25, which was of 15.42 at T1. In patients with previous radiodermatitis, the TEWL was 35.06 at T0 and it was 13.23 at T1. Colorimetry showed a L<sup>\*</sup> value of 58,06 at T0 while it was 60.04 at T1 in patients with xerosis. Patients with previous papulopustular rash presented at T0 an average value of L<sup>\*</sup> of 57.33 while at T1 this was 59.67. In patients with an outcome of radiodermatitis the average went from 53.12 at T0 to 59.91 T1. Tolerability was excellent in 100% of cases. The analysis of the diaries of application of the product showed a good adherence to therapy. **Discussion and conclusions.** The preparation based on tocopherol and tocotrienols showed an

excellent efficacy profile, a good tolerability and safety profile and an excellent profile of adherence.